

Geo 07: Student Worksheet

Population Pyramids



Name _____ Class _____ Date _____

The Structure of Australia's Population.

Task One: What happens in my age group?

The number of males and females in each age group is called the structure of the population. It is shown with a diagram called a population pyramid. To view examples go to [Animated Population Pyramids](#) on the Australian Bureau of Statistics website...

1. Study the animated population pyramid for Australia and complete the table below.

TABLE 1: STATISTICS ABOUT MY AGE GROUP BORN.....		YEAR I WAS
	This year	2050
My age		
Number of males of my age		
Number of females of my age		
Total population in my age group		
Sex ratio for my age group		
Total Population of Australia		

2. Use the information provided with the animated pyramid to explain how the sex ratio is calculated.

Comment on the changes that will take place in the sex ratio for your age group during your lifetime.

Task Two: What do the Australian or the Indigenous population profiles look like?

Preparing the data

For the following activity you will draw your own population pyramid of **either** the Australian population or the Indigenous population.

3. To begin, complete either Table 2 or 3 by calculating the total and the % of persons in each gender and age category and add these to the table.

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TABLE 2: ESTIMATED RESIDENT POPULATION OF AUSTRALIA, AGE AND SEX, 30 JUNE

Years	Males	% Persons	Females	% Persons	Persons
0-4	749,322	3.4	711,435	3.2	1,460,757
5-9	701,176	3.1	664,543		
10-14	719,775		683,954	3.1	1,403,729
15-19	770,551	3.5	729,803		1,500,354
20-24	850,180	3.8	798,065	3.6	1,648,245
25-29	843,634		818,706	3.7	
30-34	767,118	3.4	765,257	3.4	1,532,375
35-39	801,784	3.6	813,374		1,615,158
40-44	771,081	3.5	780,356	3.5	1,551,437
45-49	780,525		794,015	3.6	1,574,540
50-54	726,190	3.3	743,127	3.3	
55-59	655,407		669,617	3.0	1,325,024
60-64	603,728	2.7	608,057		1,211,785
65-69	449,957	2.0	458,975	2.1	908,932
70-74	343,680	1.5	366,513	1.6	710,193
75-79	256,049	1.1	295,493	1.3	551,542
80-84	188,941	0.8	250,340	1.1	439,281
85-89	98,996	0.4	168,059	0.8	267,055
90+	39,010	0.2	92,054	0.4	131,064
Total Persons Australia 22,328,847					

Source: Australian Demographic Statistics, Dec 2010. (Cat. no. 3101.0)

TABLE3: AGE BY SEX FOR INDIGENOUS PERSONS 2006 CENSUS OF POPULATION AND HOUSING

	Males	% Persons	Females	% Persons	Persons
0-4 years	28,273	6.2	27,306	6	55,579
5-9 years	29,611	6.5	28,353		
10-14 years	29,502		28,088	6.2	57,590
15-19 years	24,883	5.5	23,626		48,509
20-24 years	18,660	4.1	18,849	4.1	37,509
25-29 years	14,923		15,899	3.5	
30-34 years	14,992	3.3	16,475	3.6	31,467
35-39 years	14,393	3.2	16,480		30,873
40-44 years	12,631	2.8	14,249	3.1	26,880
45-49 years	10,686		11,845	2.6	22,531
50-54 years	8,601	1.9	9,380	2.1	
55-59 years	6,261		6,945	1.5	13,206

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60-64 years	4,228	0.9	4,747		8,975
65 years and over	6,423	1.4	8,707	1.9	15,130
Total	224,067	49.2	230,949	50.8	455,017

Source: 2006 Census Community Profile Series: Indigenous Profile

Task Three: Drawing and Describing a Population Pyramid

- Draw the population pyramid for either the Australian or the Indigenous population using the data in Table 2 or 3. You can do this on a diagram provided by your teacher or use the [interactive template](#) in MS Excel format (Indigenous population only) provided online with the activity. There is a print friendly worksheet which you can edit.
- Describe the shape of the pyramid you have drawn using the following words in your account and include relevant statistics.

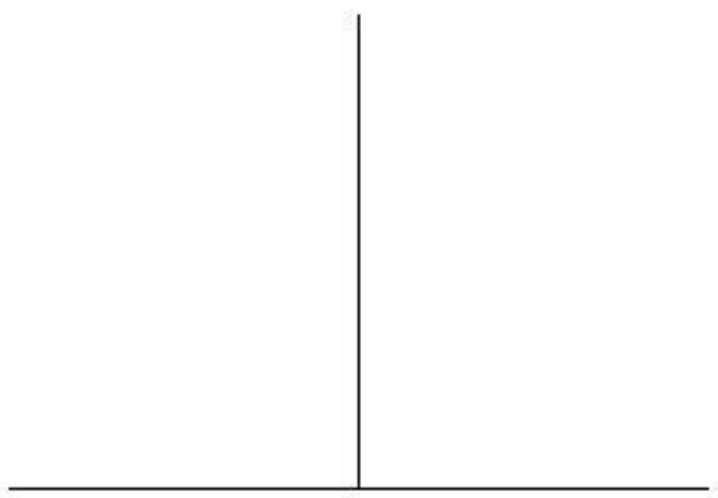
Width of base Width of top Shape of the sides
Height of the graph Ratio of males: females.

Task Four: Exploring Population Pyramids and Sex Ratios

Your teacher will allocate a State or Territory for you to study.

- a) Go to the [animated population pyramids](#) on the Australian Bureau of Statistics website (www.abs.gov.au). Select 'Toggle Outline' on the left hand side and create an outline sketch of the pyramid for the latest year using the diagram below.

Give your diagram a title and label the axes carefully.



Label your diagram, if appropriate, with the following:

- Waist

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- Bulge
- Echo effect (where narrowing or bulge appears in the offspring of this generation)

b) Remove Toggle Outline and return to the main view. Select the Male\Female surplus'. Label your diagram to show age groups where:

Number of Males > Number of Females, Number of Females > Number of Males. Provide some statistics on the graph as evidence.

7. Complete the table and fill in the blanks below.

State.....		
Visible Surplus	Age Range	Sex Ratio range
Males>Females		
Females>Males		

The sex ratio shows the relationship between males to females. Sex ratios above 100 occur in the to age range. The highest ratio isin the age group..... The lowest sex ratio for the state of is

8. John who is 75 and Claire who is 26 are both looking for a partner. Compare your state with others in the class. By taking into account their ages and the different population pyramids for each State and Territory, determine what location you would advise for John and Claire.

9. Study the outlines for the other states and territories created by members of your class. Name two states which have a similar population structure.

Name two states which have a different population structure.

Task Five: How Does Population Structure Change over Time?

10. For the state you have been allocated, draw an outline sketch for the population pyramids in 1971 and 2056.

1971

2056

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On the diagrams identify the total population of the state in 1971 and 2056.

11. Describe how the shape of the pyramid changes from 1971 – 2056. Support your answer with statistics.